

INDIAN FAMINES :

THEIR CAUSES AND REMEDIES

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Preface

So many books have appeared and been announced, and so many articles written and speeches made recently, on the subject of Indian Famines that I think a word of explanation is necessary for the publication of this small pamphlet.

Mr. R. C. Dutt's book deals almost exclusively with the great and complicated question of Indian land settlement and is a most valuable handbook on the subject. If Mr. Vaughan Nash's book be a faithful reprint of his letters to the *Manchester Guardian* and the article on *An Empire Adrift* contributed by him to the pages of *The Contemporary Review* of October last, it promises to be not only a very useful and instructive work, but will remain for a long time to come as the best and most graphic account of the great famine of last year. A very large number of interesting, able, and informing articles on our famines have appeared in the English and American Magazines and Reviews and also in some of the Indian periodicals. The speeches made by Sir William Wedderburn, Mr. Dadabhai Naoroji, Mr. Swinny, and Miss Garland, together with the studies in famine prevention written by Mr. William Digby in Lady Hope's Life of her father, General Sir Arthur Cotton, are very important contributions to the literature of the subject. But as none of these books or articles or speeches deal with the question of Indian famines as a whole or discuss or investigate their various causes and remedies, I have made an attempt in the

following few pages to supply the omission. With what success, my readers will be able to judge for themselves.

This pamphlet is published on the opening day of the Twentieth Century. I hope that, before this century draws to its close, the miserable population of India will be better fortified against all freaks of climate and that famines will be less frequent in occurrence and less fatal in their results in this ancient and unhappy land in future.

45/5, BENEATOLA LANE,
Off Harrison Road,
Calcutta, 1st January, 1901.

Prithwis Chandra Ray

INDIAN FAMINES.

India is pre-eminently the land of famines. Here at least the grim and gaunt archangel of the Malthusian trinity has found a safe, permanent, and happy home. No other country or part of the globe has so frequently and frightfully been ravaged by its dreadful visitations. In the history of no other but the Indian people has this scourge of the human race left such abiding landmarks. Though the Bible makes mention of great havoc having been caused by famines in the time of Abraham and Isaac and the sojourn of the Israelites in Egypt is attributed in the Book of Genesis to the same cause, though we read of famines having occurred in ancient Rome, a very severe one during the reign of Emperor Theodosius the Great, and one in Egypt which lasted for such an unconscionably long time as 7 years, and of several others which devastated parts of Europe and England in the Middle Ages, and though history records of it having broken out over and over again in Persia, China, and Ireland, it is in India alone that it has not only turned and

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shaped the history of a people and given a colour to their religion, but has also entered into the economy of nature, become an unavoidable condition of our existence, and is considered beyond the range of human prevention.

It is difficult to prepare a list, and give a connected history, of Indian famines. We have not the necessary materials for it, the early history of our country being so meagre and shrouded in mystery. All that we know or can gather on the subject is that references to famines are occasionally to be met with in some of the earliest writings of the Hindus, including the hymns of the Rig-Veda and the Institutes of Manu. In the most ancient and comprehensive lexicon of Panini occurs the word "हृत्तिः" (famine) and some rites are prescribed in the Vedas for the prevention of drought and its attendant evils. Yet famines or scarcities must have been very rare in ancient India. I have looked in vain in the pages of Muir's *Sanskrit Texts*, in Cunningham, Fergusson, Burgess, and Dr. Rajendra Lal Mitra's works and those of Miss Manning, Mc.Crindle, Robertson, Maurice, and a whole host of others who have written on ancient or mediæval India to find any reference to any widespread famines in this country under native rulers. The only recorded instances are the one that broke out in Behar during the time of Chandra-

gupta and the other at Kashmir about 450 A. D. in the reign of Turgina. Megasthenes, a very reliable and accurate Greek chronicler who accompanied Alexander the Great to this country, states that "famine has never visited India and that there never has been a general scarcity in the supply of nourishing food."* He further points out: "Among the Indians, by whom husbandmen are regarded as a class that is sacred and inviolable, the tillers of the soil, even when battle is raging in their neighbourhood, are undisturbed by any sense of danger, for the combatants on either side in waging the conflict, make carnage of each other, but allow those engaged in husbandry to remain quite unmolested. Besides, they neither ravage an enemy's land with fire nor cut down its trees."† Again: "nor would an enemy coming upon a husbandman at work on his land do him any harm, for men of this class, being regarded as public benefactors, are protected from all injury."‡ It appears to me that the principal reason why we hear of so few famines in ancient India is not because the people *then* were, very much better off than *now* nor of the absence of any drought but

* Mc. Crindle's *Ancient India as Described by Megasthenes and Arrian*, p. 32.

† „ p. 33.

‡ „ p. 41.

because the Aryan colonists, whose number was very much limited in those days, lived as a rule by the sides of such great and fertilising rivers as the Ganges, the Jamuna, and the Indus, that is, within the zone of plenty and certainty, and beyond that of drought and uncertain rainfall, while the bulk of the original inhabitants of the country, the hill-men and the nomadic tribes, lived upon the 'flesh of beasts of chase' whose number never failed and upon such rude vegetation that grew rank all over the country. Apart from circumstances such as these, there are no reasons to think, nor does history say, that anything else operated actively to give the country either a complete or partial immunity from famine or scarcity.

Coming to Mahometan times, the first great famine we read of occurred about 1022 A. D. After that, there was a famine in Ghor in 1055, one about Delhi and neighbourhood in 1291 in the reign of Firok Shah, another in the same region in 1327, again in 1342 under Sultan Muhamad Tughlak, one in Deccan in 1344, one in the Ganges and Jumna Doab in 1413, one in Orissa in 1471, one in Sindh in 1521, another in the same region in 1541, two in Delhi and neighbourhood in the 1st and the 41st year of Akbar's reign, two very general and terrible ones in 1631 and 1661, one in the N.-W. Provinces in 1733, one again in Delhi and its neighbourhood in 1739.

and two again in Sindh in 1733 and 1745. Though it is a long enough list, yet it must not be taken as an exhaustive one. There can, however, be no manner of doubt that this includes all the principal and historical famines under Mahometan Rule. Nor can we find in the pages of Bernier, Tavernier, Dow, Price, Elphinstone, Thomas, Erskine, Keene, Abul Fazl, Ferishta, or any one of Elliot's native historians any mention of any *other* serious or widespread famine. 18 famines, mostly of which were confined to small areas, in a period of about 8 centuries, are after all not a bad record of Moslem rule in this country.

That the distress in some of these famines was very severe and acute can easily be gathered from authentic accounts. Of one of these famines we read that "it drove the men of Sindh to eat their own kind" and an instance is quoted of two brothers making 'a meal of their mother's flesh.* Of the severity of another it is recorded that 'man devoured man and that the Hindus came into Delhi with their families, 20 and 30 of them together, and in the extremity of hunger drowned themselves in the Jumna.† The same story of 'man eating man' is repeated in the account of another and that 'the dead found neither coffin nor grave' and that the common people lived upon "the

* *Tarikh-i Tahiri.*

† *Tarikh-i Firoz Shahi.*

seeds of the thorny acacia, upon dry herbage of the forest and on the hides of cattle."* In another, we are told, "men were driven to the extremity of eating each other and some formed themselves into parties to carry off lone individuals for their food."† Ibn Batuta, a celebrated traveller of the 14th century, was a personal witness to some of the ravages caused by the famine of 1327 and saw women eating the skin of horses dead some months before and 'skins cooked and sold in the markets and crowds fighting for blood at the slaughter-house.‡ Of the great famine of 1661, Muhammad Amin Razwiny writes: "Life was offered for a loaf, but none would buy; rank was to be sold for a cake, but none cared for it. For a long time dog's flesh was sold for goat's flesh and the pounded bones of the dead were mixed with flour and sold. Destitution at length reached such a pitch that men began to devour each other and the flesh of a son was preferred to his love. The numbers of the dying caused obstruction in the roads."§ Besides all manner of individual miseries and privations and the perishing of thousands upon thousands of people of want, most of these famines caused the dispersal and break-up of

* *Tarikh-i Badshahi.*

† *Akbar Nama.*

‡ *Elliot's History of India*, Vol. III., p. 619.

§ *Badshah Nama.*

whole families and communities, the desolation of whole provinces, and the abandonment of all cultivation and desertion of whole villages and communes.

Having enumerated the famines under Mahometan rule and referred to the depth of misery the people were generally reduced to on these occasions, I think it proper to point out the different measures adopted by the rulers of the land to alleviate them. One of the earliest Mahometan rulers, Sultan Muhamed Tughlak, had wells dug during the time of a severe famine in his reign and advanced loans from the treasury to promote cultivation. When famine broke out in the land in the 41st year of his reign, Emperor Akbar "sent officers in every direction to supply food every day to the poor and destitute," and had also public tables opened at various centres of distress. In the terrible famine of 1631, Shah Jahan also opened a number of soup-kitchens or alms-houses (*langar*), gave away a *lac* of Rupees in charity, and remitted taxes to the amount of nearly 70 *lacs* of Rupees (80 *crores* of *dams*) or one-eleventh part of the whole revenue. Even such a cold and calculating Emperor like Aurangzebe rose equal to the demands of humanity in the 'prodigious and dreadful' famine of 1661. Dow thus describes the measures of relief adopted by Aurangzebe : "The emperor exerted himself with a

humanity unsuitable to his behaviour toward his own family to alleviate the distress of his subjects. He remitted the taxes that were due ; he employed those already collected in the purchase of corn which was distributed among the poorer sort. He even expended immense sums out of the treasury, in conveying grain by land as well by water into the interior provinces, from Bengal and the countries which lie on the five branches of the Indus, as having suffered less on account of the great rivers by which they are watered. The grain so conveyed was purchased, at any price, with the public money ; and it was re-sold at a very moderate rate. The poorer sort were supplied, at fixed prices, with a certain quantity, without any consideration whatever. The activity of the emperor, and his wise regulations, carried relief through every corner of his dominions. Whole provinces were delivered from impending destruction ; and many millions of lives were saved." Truly, in the language of James Mill, all this 'was the utmost activity of beneficence.'

These so far as famines and measures of relief in times of actual distress were concerned. It must not, however, be supposed that either the ancient Hindu, or the Mahometan, rulers of the land neglected protective works or works of public beneficence as a means of insuring the country

against famine by providing it with as many roads, canals, and tanks, not to speak of caravan-serais, as the needs and the circumstances of the times demanded. Remains of very ancient roads, partially bridged, are yet to be found in many parts of the country, including such distant provinces as Bengal and Mysore. The road known in former days as "pepul putta ka serak," because it was lined with poplar trees on each side, was from 60 to 70 feet broad and extended a thousand miles from Jagannath to Delhi and was in several places bridged and embanked over low ground. Major Briggs says in an account of some old native roads in Assam: "These ancient rulers of Assam fully appreciated the incalculable advantages to the country of inter-communication by land and restraint upon the incursions of the water. All their roads, 'Allees,' as they call them, were constructed with this double object, as highways above the line of flood and as "bunds" (*i. e.* embankments) to control the inundations of their rivers." Major Briggs thinks that 'for bold engineering skill and wonderful contempt of difficulties', these roads, of which nothing but relics now remain, 'deserve to rank with the works of the old Romans.' As to canals. Mr. MacGeorge says that the early introduction of artificial irrigation is 'no doubt of Hindu origin' and its value and

uses were very well-known in India from a very early time.* Inundation canals have for long ages been largely used in the Punjab and Sindh. Extensive and colossal tanks were dug many centuries ago in Southern India, particularly in Madras, Mysore, and the Carnatic, for irrigation purposes, some of which are still in operation. The Kavery Pauk Tank in North Arcot, the Viranum Tank, the Ponairy Tank in Trichinopoly, the Chembrambaukam Tank 14 miles from Madras, and the Madduk Masur Tank are cases in point. Some of the larger rivers in the south, as in the Kavery Delta irrigation in the district of Tanjore, were also laid to some extent under contribution for the same purpose in ancient times. Under Moslem rule, a bridged road was made in the Punjab from Lahore northwards by Sher Shah, parts of which can still be traced by the rows of the ancient trees and brick pillars at intervals of 2 miles. It is well-known that the greater portion of the existing Grand Trunk Road was also originally made by that Mahometan Ruler. Firoz Shah Tughlak is credited with having opened a canal from Jumna in the middle of the 15th century which was subsequently improved and extended by Ali Murdan Khan, Shah Jehan's engineer-in-chief.

We now come to the British Period. Most

* *Ways and Works in India*, p. 107.

unfortunately a larger number of famines has occurred in this country within this time than in any preceding age of its history. As it does not fall within the scope of this pamphlet to describe them at length and as they have been so frequently and so fully described by Anglo-Indian historians and so ably in the report of the Indian Famine Commission submitted to both Houses of Parliament in 1880, I shall only confine myself to a bare statement of the leading facts about them. In the following table, which I have taken the greatest pains to prepare from official publications and other trustworthy memoirs, my readers will find all the memorable and terrible famines that have devastated India since the British occupation of the country, together with some of the most useful informations connected with them :—

Besides the famines tabulated above, we have had quite a crop of minor or, if I were allowed to use the word, second-rate, famines in this century. The following are some of the more well-known among them :—

	Bombay	}
	Hyderabad	
1803	Northern Madras	
	The N.-W. Provinces	
1805-6	Deccan	
1807	Southern India	
1812	Southern India	
	Guzerat	}
	Cutch	
1813	Rajpootana	
	The N.-W. P. (part of)	
	The N.-W. Provinces	}
1819	Bundelkhand	
	Nagpore	
1824	Delhi and neighbourhood	
	The N.-W. Provinces	}
1826	Central Provinces	
	The N.-W. Provinces	}
1834	Bundelkhand	
	Ajmir	
1845	Bombay	
	Madras	}
1854	Hyderabad	

So far I have only been concerned in running

my eyes over the great famines of this country in all the different periods of its history of which any trustworthy records can be found. It is a sad chapter in the history of this country—sadder are the lessons to be derived from a close study of it. The first thing that must strike everybody is the frequency and recurrence of famines in the country. Though India is so vast a country and contain such a diversity of climates* that it never happens that all its provinces suffer together, it has been found by those who are competent to give an opinion on the subject, particularly the Famine Commissioners, that some part or other of India suffers from famine two years in every nine, and that in each of the provinces, excepting Bengal, a bad famine of some sort may be expected every 11 or 12 years, and 2 to 3 general and very widespread famines in every century. Then again it has been seen that, on the average, 20 millions of people or nearly a twelfth of the population are affected by the small famines and a population of over 40 millions by the great ones. The next most important lesson is that some parts of the country, owing to some climatic peculiarity, are more liable to suffer from famines than others. The N.-W.

*Speaking on the climates of India, Mr Blanford, the greatest authority on the subject, observes: "The world itself affords no greater contrast than is to be met with, at one and the same time, within its limits."

Provinces, for instance, perhaps, next to Bengal, the most fertile tract of country in all India, have been visited on account of their lying at the meeting-point of the two chief rain-currents of India, with more famines in one century than Bengal and Burmah in all their history. And whether it is a partial failure of the harvest or scarcity, the distress caused in the affected area is incalculable. But when local scarcities deepen and develope into general famines, they mean widespread starvation and fall like a dense pall of doom over hapless millions, despite the best efforts of the government to relieve and alleviate distress, and cannot, in the language of Lord Curzon, 'be met with a sigh or dismissed with a shudder.' Then as to methods and modes of relief, no new measures have been discovered for a long time and the British Government have only followed, and in some cases improved, upon those devised by the Hindu and the Mahometan rulers of the country. Yet for broad human sympathies and kindly regard for human life, the administration of famine relief under Sir John Lawrence, Lord Northbrook, and, last, though not least, Lord Curzon shall for ever remain one of the brightest chapters of foreign rule in India.



The Causes of Indian Famines :

Direct and Indirect.

Now I come to the more important part of my subject—the causes of Indian famines. Famines generally are directly due to (1) insects and vermins: (2) defective agriculture, misapplication of grains, and defective means of transport: (3) artificial causes such as war, unnatural and legal interference with trade and commerce, or depreciation of currency or currency restrictions: or (4) natural causes such as comets, earthquakes, hailstorms, frost, hurricanes or cyclones, floods, and, above everything, deficient rainfall and drought.

I shall deal with these causes group by group and take insects and vermins first. We have had a famine in Cutch in the year 1791 caused by black ants and others in the same province in the years 1803, 1812, and 1834 caused by locusts. Though Bengal escaped a calamity in 1810 through flights of locusts, Marwar and Guzerat suffered terribly owing to their visitation in the following year. A plague of rats visited Kathiawar in 1812 and caused considerable mischief to all vegetation and even scarcity to some

extent. These, on the whole, must be acknowledged as very rare and negligible causes of Indian famines.

To the second group of causes, India does not owe any famines, properly speaking. There was of course a time in our history when the country lacked all civilised means of transport,—roads and canals. But considering the facts that our people generally used to live by the side of navigable rivers and that our commerce dates back from a remote antiquity and also that some of the best and noblest of Indian princes from the time of Asoka, or perhaps much earlier, always evinced an anxious solicitude for the construction of roads and canals and other works of public utility, none needs be surprised to find no famine having occurred in this country within historic times owing to defective means of transport. As for any misapplication of our grains in the way of distilling and brewing, we have not yet much reason to complain, though we must not conceal from ourselves the fact that a large number of breweries are being established all over the country and that the great portion of our exported grains are intended for foreign distilleries and breweries. This mischief is, however, more due to facilities of exportation created by free trade than directly to any wilful or culpable misapplication of grains in this country.

Turning now to defective agriculture, I do not know of any period of Indian history when indigenous agricultural processes and traditional methods of culture could be condemned or found much fault with, though, of course, there must have been a time when they were very crude and imperfect. From the days of Megasthenes to Dr. Voelcker, Indian agriculture has been the wonder and admiration of all foreign travellers and critics. The surprise has been freely expressed that with so little capital and, therefore, so little opportunities for improving their land, the Indian peasants could produce so good and varied crops. Sir James Caird wrote in 1883 that 'on the good land where there is a command of water the cultivators have not much to learn'. Sir E. Buck, speaking of the Indian cultivators in the *Statistical Atlas of India* (1895), observes that they 'are the most patient, hard-working, and in many cases skilful agriculturists that can be found on the face of the earth.' Dr. Voelcker thinks : "To take the ordinary acts of husbandry, nowhere would one find better instances of keeping land scrupulously free of weeds, of ingenuity in devise of water-raising appliances, of knowledge of soils and their capabilities, as well as of the exact time to sow and to reap, as one would in Indian agriculture, and this not at its best alone, but at its ordinary level. It

is wonderful, too, how much is known of rotation, the system of mixed crops, and of fallowing. Certain it is that I, at least, have never seen a more perfect picture of careful cultivation, combined with hard labour, perseverance and fertility of resource, than I have seen at many of the halting places in my tour (in India)."

Among the artificial causes, war has played, it must be admitted freely by all students of Indian history, an inconsiderable part in the history of our famines. *The famine in the Carnatic at the close of the last century*, immortalised by the eloquence of Edmund Burke, has been generally attributed to the ravages of war and the devastations of Haidar Ali's army. Buchanan in his *Journey through the countries of Mysore, Canara, and Malabar*, broadly hints that the local scarcity in Madras during the Mysore war was turned into a great famine by the invasion of Lord Cornwallis and its horrors were intensified by the consequent interruptions to the transportation of grains. In the earlier history of the country, two severe scarcities seem to have followed in the train of Timur's invasion of the Punjaub and Nadir Shah's raid on Delhi. But whatever part war may have played in the distant and remote past, there can be no doubt that it has ceased to be an active cause of our famines since the establishment and consolidation of British Rule in India.

To unnatural and legal interference with the trade and commerce of this country we directly owe no famine. The introduction of the principles of free trade, indirectly, has a good deal to answer for a large amount of our national distress. This question is, however, so vast that I have no intentions to make any lengthy digression here; and to those of my readers who want some useful information on this subject I can only refer to the first chapter of my *Poverty Problem in India*.

In England in the reign of Queen Elizabeth occurred a famine which was attributed by some to "the unlawful and over much transporting of graine to forreine parts." Sir James Caird observed that the principal cause which made the famine in the Punjab in 1878 was the large exportation of wheat to England. It will not be treading on very doubtful ground to say that the intensity of a large number of Indian famines is due to the very large exportation of Indian grains. In this connection it must also be observed that both under the great Mogul and British rule, human sufferings and distress have been occasionally greatly relieved by interfering in an opposite direction with some of the most cherished principles of trade and commerce.

About the effects of currency restrictions on national well-being, I have, however, no manner of doubt, and I believe that there is some sort of

intimate relation between the Indian currency question and Indian famines. Penkethman is quoted in the *Encyclopedia Britannica* to say that "by means of changing the coine all things became very deere, whereof an extraeme famine did arise (in 1124 A. D.), and afflict the multitude of the people unto death." Regarding the effect of that relation in this country, I would prefer to put the case in the words of a very competent and lucid foreign writer rather than say anything myself. Mr. Wm. Brough, writing in the *American Arena* of September last, makes the following definite statements and observations on the subject :

"The famine in British India to-day is, as was that of 1897, a direct consequence of the demonetization of silver in 1893, whereby a factitious current value was given to the rupee. The labouring millions of India, the *ryots*, who are the cultivators of the soil, had long been in the habit of putting all their savings into silver bangles or other silver ornaments, and it was upon these small hoards that they depended to enable them to bridge a season of short crops or of famine. The effect of demonetization upon these hoards was first to rob them of a portion of their marketable value and thereafter to deprive them, and all the uncoined silver in British India, of that superiority in

stability and exchangeability over all other commodities which is always possessed by the metal that constitutes the currency and is the monetary standard of a people. The effect of demonetization was, in short, to thwart and discourage the wholesale practise of saving, and to impress the *ryot* with hopelessness."

As the Indian people have not yet reached the credit stage of industrial development and as there is no use of paper money in all India excepting at some commercial centres, the currency of the country is bound to be metallic ; and, considering the poverty of the people, silver is the only commodity that can serve this purpose effectively in this country. "Silver", says Mr. Brough, "was the money of India long before the Englishman had made his appearance there ; it had come into general use, not by the wisdom of legislators, but by a process of natural selection ; and if the Indian Government would cease its arbitrary interference with this natural order, silver would again assume its *functions* as the currency and standard of value for the people of India." With the mint closed to the free coinage of silver, India has been deprived of a 'free, large, cheap, and abundant currency' and silver of its monetary function. Hence silver can now no longer derive its elasticity from the interchange of coined Rupees or from the innum-

erable small hoards of uncoined silver that used to be brought hitherto into monetary service when needed and so long did duty for credit with the peasant farmers of India. The Indian cultivator "has no credit and his margin of capital above the famine line is so narrow that it may easily be reduced to nothing by a false governmental ruling that he is incompetent to overcome ; he simply sinks into helplessness." And thus left without any cash or credit or any resource of any other kind to withstand or fight the famine, he falls a very ready and easy prey to the effects of the very first failure of the rains.*

Among the second group or the natural causes, comets or earthquakes donot appear to have ever been responsible for any Indian famine. Earth-

*On this subject the following letter appeared in *The Glasgow Herald* of the 27th October last :—

Sir,—Referring to the leader in your paper of the 20th inst. on the Indian famine, may I ask what is the real cause of the famine ? Is it exchange, or the Indian revolution in the value of gold and silver ? Is it that the Government have largely bought in rupees at a value of 1s. 4d. what the poor natives gave their labour for in the last 20 years at an average value of 1s. 8d. to 1s. 10d. the rupee ? Has the coinage by the Government of more rupees on the basis of a standard value of silver of 1s. 4d. for each rupee in exchange for the old gold standard or weight of a sovereign anything to do with depriving the natives of their hard wrought value of their rupee ? If so, who has derived the profit on depreciation of 6 to 8 annas on the rupee since 1870 ? Not the poor natives surely, but the Government, who should meet the deficit.—I am, &c. NAIK.

In this connection, I would desire every one to read an excellent paper on *India and the Currency Question* contributed by Mr. Dulabhai Naoroji to Mr. Natesans *Indian Politics*.

quakes cause famines by directly destroying standing crops or fields under cultivation and comets by inducing drought through abnormal heat. The scarcity in the N.-W. Provinces and some parts of the Central Provinces in 1825 was caused by a thunderstorm. In 1866 much crops were lost by a hail-storm in some of the districts of Behar. Though in England and France considerable destruction of standing crops and occasionally famines have been traced to frost, and though frost is reported to have caused some mischief to crops in Behar during the great famine of 1873-74 and considerable damage in Bundelkhand in 1820, and the famine in Cashmere about 450 A. D.* is also said to be due to it, yet in tropical climates it is not at all a powerful factor to famines. In 1822, in 1867, and again in October 1876, some terrible cyclones, followed by strong tidal waves from the sea, burst upon some places on the seaboard of Bengal and caused not only the destruction of all crops but also of a large number of human lives and heads of cattle. Floods have also operated strongly in causing some famines in the country, particularly when preceded by drought. The great Bengal famine of the last century and the Orissa famine of

*This famine has been fully described in Kalhan's *Rajatarangini*, a work of the 11th century A. D.

1865-66 owe their severity to floods more than to drought.

I now come to the *principal* direct cause to which most of the Indian famines are really due. The causes I have enumerated above, both artificial and natural, are so rare and trifling that they altogether sink in importance compared to deficient rainfall. Failure of the monsoon—what an amount of mischief and distress does it not carry for this unhappy land and its miserable population? And when one remembers that more than 99 out of every 100 Indian famines are due to drought, and that since the dawn of history it has been frankly recognised as one of the deadliest and most insidious enemies of Indian mankind, and that a famine proper or widespread famine is usually caused by a succession of seasons of drought, one is bound to give it his best consideration and notice the subject at length.

What then is a drought, what is meant by the failure of the monsoon, how it affects our cultivation and what are its general incidence are questions of primary importance; and on these subjects I will not thrust upon my readers any crude ideas of my own, nor, on the other hand, any highly technical or expert opinions such as those of Messrs Elliot and Blandford, two of our most distinguished meteorologists who have written

much on them. I will allow a prominent Famine Commissioner to state the facts about them in a general way, and, considering the importance of these questions, I hope my readers will kindly excuse me for the great length of these quotations. Regarding the monsoons, Sir H. S. Cunningham says :—

“The autumn harvest, which to a large extent supplies the staple diet of the population, depends on the adequacy and timeliness of that great rain-bearing current known as the south-west monsoon ; while the winter harvest, which in Upper India is the more valuable of the two, requires for its success, not only that the summer rains should be sufficient for the preparation of the soil, but that there should be throughout the winter occasional rainfall sufficient to mature the crops.

“Both the summer and winter rainfall, however, are subject to frequent disturbances. Not only does the volume of the vapour-laden current vary from year to year in amount and strength of movement as it approaches the coast of India, but its advance across the country depends on numerous physical influences of which little is known beyond the irregularity of their action and effects. The main cause of the in-draught of air during the summer monsoon is the increased heat and consequent diminution of atmospheric pressure in the northern part of India, and a corresponding increase of pressure in the south ; and the slightest disturbance of the gradual diminution of pressure from south to north is certain to produce grave results on the rainfall. The controlling causes of the variations in atmospheric pressure are but partially understood ; but it is the opinion of those best acquainted with the subject that, besides the great cosmical conditions which are probably connected with changes in the surface of the sun, and which affect the entire globe, there are certain local influences in

India connected with the snowfall of the Himalayas, and the effect of the winter rains in cooling the atmosphere, which render the movements and character of the monsoon exceptionally difficult of calculation. That portion of the current which, advancing across the Indian Ocean, first strikes the Western Ghats, sheds a vast portion of its contents on the opposing mountain heights; the region immediately to the eastward, consequently, gets but a scanty supply. Again, the more easterly inland portions of southern India depend for their rain-supply mainly on an in-draught from the Bay of Bengal which occurs late in the autumn, and this frequently is either diverted by cyclones or other interruptions in the bay, or spends itself near the coast. Upper India, again, owes its rainfall partly to a stream of air which has first to traverse the Great Indian Desert and the sultry plains of Sindh and Rajpootana, partly to a current which, checked in its eastward course by the mountain ranges of Burmah, travels up the Bay of Bengal, is arrested by the mountain ranges in the north-east of that province, is again diverted to the westward by the Himalayas, and sheds itself, as it travels up the valley of the Ganges, on the great plain country of Bengal. It is obvious that before the North-Western Provinces and the Punjab are reached, the current must to a great extent have spent its force, and that any accidental obstacle, such as, for instance, the intervention of a tract of country in which the atmospheric pressure happens to be in excess, may altogether arrest it. The consequence is that, although there are many parts of India where the rainfall is uniformly ample, there are many regions which are in ordinary years reached by an attenuated rain-current, and which are continually liable to have their slender supply altogether cut short, or so seriously curtailed as to ensure disaster. The southern parts of the Punjab which lie remote from the Himalayas and bordering on the great desert—the southern and western parts of the North-Western Provinces, and notably the region between Delhi and Agra—the north

and west of Rajpootana, the uplands of Bombay beyond the Western Ghats, and the high inland tracts of Madras, Hyderabad, and Mysore—are all so situated that the force of the monsoon is always greatly diminished before it reaches them, and that a feeble monsoon is very likely either not to reach them at all, or to be too late to save the crops.”

In the above account my readers will have found what failure of the monsoon means and what a draught really is. The Revd. Robert Everest appears to have been the first who adduced facts to indicate the periodicity of these droughts or unfavourable seasons in India. In the report on the famine of 1860-61, Colonel Baird Smith had also something to say on the periodicity of famines. Experience and careful observations have since then shown us that we must be prepared for a drought followed by severe distress once in every 12 years and that some part or other of India suffers from famine 2 years in every nine. This has been pointed out by scientific observers to be owing to minimum sun-spots. The sun-spot theory of rainfall is based on the fact that all the phenomena connected with the sun ebb and flow once in 11 years and that from the relation of the earth to the sun these maximum and minimum periods regulate all terrestrial phenomena. From the occurrence of sun-spots and rainfall, between the years 1813 and 1876, the late Sir William Hunter concluded that the minimum period in the cycle of sun-spots had been a period of

regularly recurring and strongly-marked drought in Southern India. On November 22 last, Sir Norman Lockyer and his son, Dr. W. J. S. Lockyer, read a paper at the Royal Institution on "Solar changes of temperature and variations of rainfall in the region surrounding the Indian Ocean" in which they confirm by statement of actual facts the truth of the eleven years cycle theory. In this connection one also cannot help referring to the fact that there seems some tendency for a bad year in the south to be followed by a bad year in the north.

For the incidents of drought, I think I cannot do better than again quote from Sir H. S. Cunningham :—

"The unchecked sky blazes on pitilessly, day after day, as if in derision of the scorched, brown plains below : presently there is no room for doubt or for hope : the harvest is destroyed : the season of plenty, of cheap prices, of high wages, of abundant meals, of comparative ease, of laying by a little hoard for the year's consumption, of paying off the long-owed arrear of rent or revenue, of the simple rustic festivity—has passed, leaving behind it a population with empty garner, and light purses, face to face with at least six months of struggle and privation. The first effect of the drought has been to stop all field labour, and thus to throw the great mass of the labouring population out of employment. For one thing, such labour has become useless and impracticable : and if it were not so, the landowners, with lowered funds and shortened credit, are unable to incur any expense. In the houses of the well-to do, the precious stores of grain are hoarded with a more jealous care than ever : prices rise to double, treble,

and sometimes four times their usual rate : everyone is on short commons : the pasture fails, the trees have been stripped, the very thatches used as forage—the cattle are dying by thousands. The population, anxious, restless and alarmed, begins to move : great streams of wanderers flow off in the direction of parts of the country where rumour reports that the drought has not extended : other poverty-stricken crowds pour into the great cities and lie squalid and half-famished about the streets : others, again, quit their villages, where life is no longer possible, and wander, aimless and dejected, about the country, soon, too often, to sink exhausted by the wayside, or to be brought prostrate and moribund into the rural police-station. The small landowners and tenants curtail every expense, hoard every resource, and prepare themselves for a period of endurance which, tradition warns them, must last till the winter crops ripen, or, if they fail, for a year or more : all those who live upon others (and their tribe is legion) begin to be pinched : the professional mendicant, who lives ordinarily in comparative ease on the subscriptions of the charitable, finds his supplies running short : then the petty village artisans and traders begin to suffer as the ordinary traffic of the village is curtailed : in a few weeks the official of a famine-stricken district may find a population of hundreds of thousands of enfeebled, frightened, demoralised people on his hands, with nothing but his energy, promptitude, and skill between them and destruction."

I have so far dealt only with the proximate or immediate causes of Indian famines. But all who have given an anxious thought to the subject know clearly that their real and only cause is the extreme indigence of the people. Surely failure of the monsoon or continued drought or some other cosmic forces may answer for a poor out-

turn or short crops or even their complete destruction in this or that province, but to say that the elements of Nature are wholly and exclusively to blame for the great scarcities and famines which it has been the singular misfortune of India to go through in recent times is indeed very much wide of the mark. In pre-British days, when there were not so many good roads and the commerce of the country was so insignificant, these elements might have some opportunities to cause considerable distress and suffering; but now that the whole country is traversed by a network of Railways and our external commerce is so extensive and free, there can absolutely be no excuse for these famines. The forces of Nature, as we generally understand them, have their influence, and sometimes prove equally unrelenting and merciless, all the the world over, but it seems quite a puzzle that particular countries should suffer for their vagaries and be frequently visited with famines while others should not have so much as ever the occasion to enquire into the relations that exist between their meteorological condition and food-supply or to know what famines are like. There was indeed a time in the history of Europe and the British Isles when long-continued drought brought on scarcity and famine, distress and suffering. But England for a long time past, particularly after

the repeal of the Corn Laws, and France, Germany, and America for many generations have never known or witnessed such widespread distress as come to us once in every decade. If, in spite of unfavourable conditions and occasional failure of indigenous food-supply, England, France, Germany, the United States of America, and the Australasian Colonies of Great Britain can invariably escape from the terrible grip of this fell scourge, why should then India alone be a ready and frequent prey to its visitations? Surely the elements of nature cannot be convicted of any dread or partiality for the European Powers or the Anglo-Saxon race. Nor like the Asiatic cholera and plague, has famine any germs which find in India a very congenial soil to thrive. Nor are the Indians a particularly bad lot of people who deserve to be punished with God's wrath for their sins.

Try as one may, one cannot help arriving at the conclusion that the great and grinding poverty of the people is the real and only cause of our famines. It is because our people are so poor that a single unfavourable season or a bad harvest finds them without any resource or reserve of any kind to fall back upon. It is neither local scarcity nor the price of grains, but the utter inability of the people to buy their food, either locally or from other provinces or foreign

countries, which really constitute an Indian famine. If our people had been a rich one, they could either always import any amount of food grains they needed to meet and supplement local or general deficiency, or, better still, prevent the exportation of their own agricultural produce and thus stave off all manner of scarcities and famines. Rich peoples like the English and the American keep famine from their doors by importing their food-grains from all corners of the globe while less opulent and agricultural nations compass the same end by buying up all their indigenous produce and thus preventing their exportation. India cannot do either: she is *too poor* for both. She has neither the wherewithal to buy the produce of her own soil nor the means, it would be mad to think of any such time being within measurable distance, to import her food-stuffs from abroad. It is, in other words and to put it more clearly, a famine of money, never one of food. Hence the distress and helplessness of the situation.

Close students of Indian economical history know, and none have ever seriously questioned the fact, that India, on the whole, produces enough of crops every year, good or bad, to feed her own aggregate population. In ordinary years, she not only feeds her whole people, but have also enough of grains to export to foreign countries.

In famine years her exports do not show any noticeable decrease, which goes to prove beyond doubt that food grains are *never* so insufficient as to fall far short of the demands and necessities of her people. This is evident from the fact that the money value of rice and wheat exported out of this country has averaged over 13 crores of Rupees a year during the last 10 years, in which period we have had a great scarcity in some portions of Bengal and Madras and also one of the severest famines of the century. And one must remember that 13 crores of Rupees is a sum of money which no Government has yet spent for the relief of distress during any single famine. What a strange irony of fate that the very cultivators who create the agricultural wealth of this country should be the first to break down in all years of bad harvest, and that, for want of the very food they *produce* but *cannot* keep, die they must in hundreds of thousands.

There is also no margin for any scepticism about Indian agriculture being greatly handicapped and getting into a dismal and forlorn business for this very indigence of her peasant population. When cattle die or harvests fail, it means the utter collapse of at least 4 out of every 10 holdings in the country. Nor have the proprietors of 4 of the rest of the holdings any capital to improve them, irrigate their fields artificially, employ better

ploughs or better breed of bullocks, use manure, keep off pests and blight, and take any other active steps or measures to ensure better husbandry or minimise the effects of drought and flood.

It is then the intense poverty and the consequent inability of the people to improve their small holdings, to buy food at comparatively high prices, and to prevent the exportation of food-grains, particularly in years of short crops and bad harvest, which cause so much misery and distress ; and it is simply because the Indian famines are not so much food-famines as money-famines that the Government of the country finds itself perfectly impotent to control and struggle with them. Hence the problem of famine in India is indirectly and essentially a question of *£. s. d.* or in other words the great problem of poverty.

What this deepening and perpetual poverty of the Indian masses may be owing to is not the subject which I am concerned here to discuss. My views on Indian poverty have been fully stated elsewhere at length.* Yet briefly I shall notice here some of the most prominent points which have been put forward as the principal contributory causes of our economic depression. They are the excessive drain of our national wealth to a foreign country, dependent on the exigencies of a costly foreign administration, and over-population, over-

* *The Poverty Problem in India* (Thacker, Spink & Co., 1895.)

taxation, and over-assessment of land. As I intend to deal with the last two in the next chapter, I shall only speak a few words here with reference to over-population and foreign drain.

The theory of over-population, though not perfectly a myth, has certainly been raised to divert public attention from the real issues of the problem. India is a very ancient country and has for a long time enjoyed internal peace and security enough to help the growth of population. Yet India is by no means over-populated, certainly not in the sense in which some of the more civilised countries of Europe are. While Belgium supports on the average 540 souls in one square mile, England 500, Holland 361, Italy 264, and Germany 237, India does only 230. Among Asiatic countries, China supports a larger population, 290 in a square mile. Besides, the tracts of the country where famines are generally frequent and fatal are some of the most sparsely peopled parts of the Empire. The Punjab has 188, Berar 164, Bombay 151, Central Provinces 125, and Rajputana nearly 110 souls per square mile. This would hardly bear out the theory of over-population.

The next, drain of Indian money to England, is indeed not only a great and just grievance of the people of this country but is also a most fruitful source of national poverty. So early as

the close of the last century, the signal of danger was raised against it. Anxious politicians and statesmen have made no secret of their feelings on this subject. Lord Cornwallis observed that "the heavy drain of wealth by the Company with the addition of remittances of private fortunes was severely felt in the langour thrown upon the cultivation and commerce of the country." Mr. Saville Marriott observed in 1836 : "Most of the evils of our rule in India arise directly from, or may be traced to, the heavy tribute which that country pays to England". In 1837, Mr. John Shore observed that the English Government 'has effected the impoverishment of the country and people to an extent almost unparalleled.' Mr. Montgomery Martin calculated in 1838 the Indian drain to have amounted to £723,000,000 sterling in 30 years, and remarked that "so constant and accumulating a drain, even in England, would soon impoverish her. How severe, then, must be its effects on India, where the wage of a labourer is from 2d to 3d a day."* John Stuart Mill has pointed out in very clear and forcible language the effects of such a drain.† Sir George

* *Eastern India*, Vol. I., p. 12.

† John Stuart Mill says :—

"The result is that a country which makes regular payments to foreign countries, besides losing what it pays, loses also something more, by the less advantageous terms on which it is forced to exchange its productions for foreign commodities. International payments for which no equivalent

Wingate, a most experienced Anglo-Indian official, has also criticised this drain in no sparing terms.* The late Mr. John Bright also brought this question under his trenchant criticism. But the indefatigable exertions of Mr. Dadabhai Naoroji stand out in bold relief in this connection. Mr. Naoroji has not only marshalled out a good array of facts and figures in support of this standpoint but has well-nigh converted a sceptical public into his convictions. The official drain alone now represents a sum of over £20,000,000 a year. And official and non-official together, the annual Indian drain now amounts to between sixty and seventy millions sterling.†

Writing in the November issue of the

Positivist Review, Mr. A. H. Haggard, late of the Bengal Civil Service, observes : "Famine is the gift of the British to India : it is the return given for careers for her sons in the Civil and Military Services, for the pride of power and conquest, for the pension of retired officers, their widows and children, for guaranteed interest on Railways and other works, for regularly paid interest on Government loans."

Yet, I think, Indian poverty is due neither solely or primarily to this drain nor to over-assessment of land nor to over-taxation. It is due to no one cause in particular but to a combination of causes. With all deference to the opinions and convictions of Messrs Dadabhai Naoroji and R. C. Dutt, of Sir Henry Fowler and Lord George Hamilton, and of the leaders of the Indian National Congress in this country, I feel bound to state that the vast and intense poverty which is to be found in India at the present day is due to the effects of unrestricted or free trade, the decadence of indigenous arts and manufactures, the absence of all diversity of occupations for, and all healthy incentives to economy among, the people, to the paucity of thriving industries of any kind, and last, though not least, to the great revolution in our tastes and habits of life.

When we say India is very poor we state a general and vague proposition which might fail to

carry its due import to the minds of many people. But the matter may be brought much nearer home by stating that in India, from time immemorial, there has been a 'most unequal distribution of wealth in consequence of which its upper classes have been, and always are, enormously rich and the masses hopelessly poor. And when we find that all wealth in this country accumulate in the hands of the upper ten and the agricultural population can hardly keep body and soul together, we may realise to some extent the abject misery in which our people are steeped and the distress and sufferings to which they are reduced in unfavourable seasons or lean years. This continued and perennial want or chronic destitution has also engendered in our people certain habits of improvidence which now lie too deep to be easily eradicated. As a consequence, the Zamindar, the middleman, the bania, the sowcar, the mahajan, the broker, and I was also going to add, the lawyer thrive and fatten at the expense of the starving ryot. As long, therefore, as these conditions of life do not change very materially, as long as the peasantry are not freed from their hereditary bondage and saved from chronic indebtedness, as long as the masses are not allowed to participate in the general wealth and prosperity of the country, as long as there spring in the minds of our cultivators no incen-

tives to enterprise and better husbandry on the one hand, as well as providence and thrift on the other, and no diversities of occupation are found for a large number of them, as long as our government donot become more sympathetic and economic, so long droughts and floods, locusts and ants, and a whole host of them, will continue to creat infinite misery and distress in this unfortunate land.

The Remedies to Indian Famines

In the preceding chapter, I have said that whatever may be the direct or proximate causes, and they are numerous, the primary cause of Indian famines is the extreme indigence of the people. Anything, therefore, that will reduce this overwhelming poverty of, and create wealth among, the agricultural population of this country, together with such necessary safeguards against the effects of drought as lie within the power and means of the State and the people to take, must be looked forward to as the only cure of Indian famines. Beyond a rational treatment, I have got no panaceas or patent or quack remedies to suggest. I shall, therefore, confine myself in this concluding chapter to an examination of some of the most natural means which are very likely to fortify and secure the lower ranks of our people against all climatic vicissitudes and the risks of wholesale destruction.

The revival of indigenous arts and manufactures, so far as is possible and practicable, the improvement of old,* and the establishment

* *Vide* Sir George Birdwood's *Industrial Arts of India* and Mr. S. J. Teller's speech delivered at the British Indian Association of Calcutta last autumn on the same subject : also an article by the present writer on

and development of new, Indian industries, and the successful exploitation of the many material and economic resources of the country must naturally suggest to every thoughtful mind as the first and principal measure to be taken against the growing poverty of the people. This may appear to be a very large order but by no means an impracticable or utopian idea, and this is the *only way* how. England and other Western countries have cut the Gordian knot of famine and destitution.

It is impossible for me to elaborate a definite scheme with the above object in the narrow limits of this pamphlet. But it will not be amiss to point out here that a most anxious discrimination has to be made in the matter as many of our dying arts and manufactures are not worth reviving while there are others which no amount of human efforts and expense can save from their doom. In our endeavours to do a good turn to the Indian artisan or handicraftsman, we should always take good care not to engage in a wild goose chase of any kind. To run directly counter to well-established laws of political economy, and ignore the tendencies and spirit of the times, will be not only a good deal

Indian Industries in the March number of Mr. Natesan's *Indian Review* and reproduced in the pages of the *New Century Review* of London (August)

of energy and time wasted and money thrown away for nothing, but it would be positively injurious and demoralising and might land us in many financial disasters. As regards the establishment of new industries and the development of the material and economic resources of the country, it is a matter of sincere congratulation that a fair and decent start has already been made in that direction in various provinces. Coal largely, petroleum, mica, and gold, to some extent, are now being mined, extensive tea and coffee plantations and a large number of cotton, wool, silk, jute, and oil mills and presses, together with manufactories for the tanning of hides, refining of sugar, and the curing of tobaccos as well as those of paper, pottery, soap, and candles, have been established in the different parts of the Empire.* Yet it is only the beginning of an industrial life. It is only a start and the whole race still remains to run. It is just the moment when we must take time by the forelock, look facts fairly in the face, be up and doing, and utilise all our resources. There is among us, in the language of a most distinguished Englishman, 'plenty of money, plenty of cheap labour, plenty of talent, science and ingenuity to set any number of mills and machin-

*It is a matter of historical curiosity that long before many of these mills and factories were established, the Famine Commissioners of 1879 recommended most of them as very promising fields for industrial enterprise.

ery in motion, if only the will and the spirit of enterprise could be found to utilise all these blessings'. No listless waiting has ever re-generated a dying or fallen nation nor will ever regenerate us, and if we must sit up with folded hands for better days, then surely the amelioration of our condition must be put off to the Greek Calends.

The Government of the country have also hitherto shamefully neglected one of their primary duties. It has been very appositely pointed out by an English critic that though the doctrine of the State leaving industrial enterprise to take care of itself may be a very sound principle of Government in a European country, it is certainly quite inapplicable to India. Protection from foreign invasion and the maintenance of peace and order are not the whole work of an Asiatic Government. These are the absence of wrong rather than the presence of right, negative rather than positive, and do not constitute or make for progress or prosperity. "The direct, deliberate, systematic promotion of industrial enterprise," says Sir H. S. Cunningham, "is not a less important duty, and its thorough recognition by the State would, I believe, be the most important administrative reform of which the Indian system is susceptible."*

*Cunningham's *British India and its Rulers*, p. 236.

"I have always considered, and consider still, that the Government

So both the State and the people, and in the peculiar circumstances of this country, the State *before* the people have to rise equal to the occasion. Neither the Government nor the people can any more safely allow the country to go adrift, and unless the people and the State can manage between them to carry out in full the programme of a commercial and industrial life, nothing will prevent these famines breaking out in, and decimating the people of, this unhappy land.

But do what we may, a long, long time must necessarily pass before we can hope to find in this poor, conservative, and agricultural country a full development of industrial enterprise. When that golden day will come, if come it will, when agriculture will be superseded by industry in this country, the problems of Indian famines and Indian poverty will be solved for good. But, till then, the primary duty of the State and of the responsible leaders of the people will be to do everything in their power to improve the condition of the agricultural peasant and to minimise the effects of drought by the available resources of civilisation.

might do much, if they chose, to encourage private enterprise in India," Sir Richard Garth in a letter to *India* (May 23, 1890).

In this connection, I am bound to say that if the Mines Bill, which is just now under the consideration of the Government of India, be passed, it will seriously affect the nascent mining industry of the country.

Several causes have conspired to make the condition of the Indian agricultural labourer as bad as bad can be, but to what extent have they separately contributed to his misery, it is useless to speculate. Naturally a man of extremely slender means and poor resources, he hardly can make two ends meet and keep his shoulders over debt. Yet in ordinary times and circumstances he manages to pull on somehow. But if it turns out to be a bad season or if he has to marry or give in marriage, buy seeds or cattle, or repair his hut or any other extra expense to meet for any pressing requirements of domestic life, woe to him and he goes to the bania, the sowcar, or the mahajan and gets from him the money he wants. From that moment till the end of his days he lives in chronic and growing indebtedness and when he dies he leaves behind him a legacy of destitution to his children. Once in debt for ever in debt is the average condition of a ryot's life. Why is this so? Does he never reap a good or a golden harvest? Does nature never prove bountiful or kind to him? Certainly; but he can save nothing as nearly all his profits go to the moneylender's pocket in the shape of interest. As he hardly has any credit, he always needs have to pay a very heavy rate of interest for the money he borrows, and heavy rates of interest in India may mean, or come up to, any

Government of Bombay and sent to the Government of India. Lord Ripon and his Finance Minister, Sir Evelyn Baring (now Lord Cromer), endorsed the scheme and forwarded it to the Secretary of State for India for sanction with the recommendation that it "would be productive of much benefit to the country." At one of the pigeon-holes of the India Office this unanimous despatch of Lord Ripon and his Council was laid to its final rest and the scheme itself was stabbed in the dark no one knows by what hand or for what reason. Sometime after Sir John Gorst informed an anxious public in reply to a question of Mr. Samuel Smith that the scheme was vetoed because it was not thought to be 'practicable.' Not 'practicable' indeed, after it had taken some of the best time and consideration of some of the most experienced officers of the State to mature it and the Provincial Government had endorsed it and the Supreme Government had written an unanimous despatch in its support! But since then the proposal has occasionally been revived and public opinion considerably enlightened on the subject. Only a few years ago a distinguished Madras Civilian was entrusted to enquire into and report upon the feasibility of their establishment and their scope of usefulness in the country.* But thanks to the anxious

* On this subject Mr. Dupreux's *People's Banks for Northern India*

solicitude of Lord Curzon to do his duty by the people of this country with courage and sympathy and also to the enactment of the Punjab Land Alienation Bill, the Government of India have again made up their mind, and now feel obliged, to move in the matter. Sir E. F. Law, our present Finance Minister, who is reported to have considerable experience of their practical working in the Continent of Europe, is understood to have already put forward a scheme for the establishment of a number of peasants' banks in the country with government countenance and support. A Committee have also been appointed to meet shortly in Calcutta to consider the scheme. It is most fortunate that Lord George Hamilton also appears to be rather favourably disposed to the question. Under the circumstances, it is not too much to hope that the execution of the scheme is now only a question of time. With agricultural banks established all over the country and guarding against the increase of the peasants' temptations to incur debt, there is every reason to hope the the lot of the average ryot will not be half as bad as it now is, and that, when a famine comes, our cultivating classes will have at least some means at their disposal to fight it with successfully.

(A handbook to the organisation of credit on a Co-operative Basis : Thacker, Spink & Co.) may be read with some interest.

Directly and intimately connected with the question of agricultural credit is the great one of land revenue. Mr. Romes Dutt has done a most signal and distinct service to his country by bringing this subject to the front at this critical moment of its history. I do not desire to go over the ground traversed by him, nor do his facts and arguments need much, and some of them even would not bear any, repetition. Since the publication of his *Open Letters to Lord Curzon*, many of his facts and statements have been openly challenged and some partially and successfully controverted.* But his main contentions that the present rates and terms of land-settlement act prejudicially to the best interests of the ryot in most parts of the country, and that heavy assessment is the order of the day and one of the principal causes which drives the bulk of the peasant-farmers to the bania, the sowcar, or the mahajan, perhaps nobody conversant with the life of our cultivators will venture to deny. Into the historical questions, however, as to whether the State ever claimed to have owned the soil, or whether assessment was of the nature of a

* *Vide The Englishman* of September 6, 12, 17, 24 and of October 2, 15 and 30th and the Resolution of the Government of India of the 5th October last and also Mr. Dutt's replies to them. The letter which appeared in the *Times of India* on November 3 last over the signature of the Hon'ble Mr. B. K. Bose on the Nagpore settlements must also be read by those who want to make a careful study of the subject.

rent or a tax or both combined, before British rule, or whether the rent from land was small or heavy under Hindu and Mahometan governments,* there is absolutely no good entering at the present day. The circumstances of the country have so mightily altered and changed within the last two centuries that excepting a mere academic interest no greater importance can properly be attached to their discussion now. The India of to-day has so little in common with, and is so widely different from, the India of the great Mogul. No man can, therefore, safely institute a comparison between these two different periods of Indian history or judge the one by the light and standard of the other. So, when the critics of the present system point out that India was never before *so highly* assessed or when its apologists say that it is only based upon the scheme devised and elaborated by Rajah Todar Mull with the sanction of Emperor Akbar in 1580 A. D. and some other subsequent Mogul settlements, and that the English settlements, however high, always leave to the ryot a greater margin of profit than the two-fifth of the Mogul period, they ignore some of the most important considerations of the question. I am not going to discuss them

*A short account of land revenue under Hindu rule and a *resume* of Akbar's land-settlement from the *Ayazi-Akbari* is given in Mr. R. C. Dutt's *Famines in India*, pp. 224-244.

here, but I think it due to fairness to state that whenever agriculture is driven to descend to worse lands or more onerous processes and is unaccompanied by increased facilities for production, a rise of rent is *inevitable*. Heavy assessment is bound to follow severe struggle and depletion.* There is no helping it or any way out of the difficulty. Yet against the present system as a whole, there are indeed some very objections to make on the following grounds:

(1) That the fertility of the soil has been greatly reduced and the land now yields much less crop than it used to do a couple of centuries ago†;

(2) That seldom has any ryot any store of grain or grain-pits to fall back upon in a rainy day at present;


*John Stuart Mill.

†Mr. Seymour Keay in an article on the *Spoilation of India* observes that "it has been somewhere mentioned on the authority of Sir William Hunter, that, owing to the want of manure, land, which in the time of Akbar yielded 1140 lbs., now only yields 840 lbs. per acre."

In the middle of the 17th century—according to what are regarded as accurate tables in the *Ajeen Akbari*—the yield of picked cotton in India was 223 lbs. per acre; by 1828 it was only 128 lbs.; in the 1st decade 67 lbs.; and has now declined to an average of 52 lbs. Rice during the same lapse of time fell from 1338 lbs. per acre to from 800 to 900 lbs., and wheat from 1155 lbs. to 650 lbs." *Mumbai Mail*, June, 1876.

Mr. Robertson, Superintendent of a Government Experimental Farm, observed in a lecture before the Society of Arts in London in 1880: "Experienced men positively assert that the deterioration of the soil during the last 30 years has been no less than 30 per cent."

(3) That its rigidity allows no ryot to pay in his revenue at *his convenience* ; and

(4) That, owing to the decline of all indigeneous arts and manufactures, agriculture has *now* become the only industry of the people and there is consequently a great pressure upon  which is never allowed to remain fallow to its fertility.

The absence of all lucrative occupations or sources of wealth among the people and of grain-pits, the rigidity of payment, the enormous drain of Indian wealth to England in the shape of an indirect tribute, and the gradual exhaustion of the soil, *all these now* make short settlement and heavy assessment a curse intolerable to the Indian peasant. Warren Hastings in an official letter * described the heartless nature of the revenue exactions in Bengal in his day, and Col. Baird Smith and Messrs Robert Knight and F. J. Shore have left on record their impressions of the effect of heavy and rigid assessment of revenue in the N.-W. Provinces, Guzerat, and Bengal respectively before the dark days of the Sepoy Revolt. Since then, Sir John Lawrence, Sir Auckland Colvin, Sir Charles Aitchison, Sir Louis Mallet, Sir Richard Temple, and Sir John Strachey, with many others, have strongly

*Dated Fort William, the 3rd November 1772, to the Honble the Court of Directors

denounced constant revisions of settlement and all heavy assesment as 'a dangerous policy'.* It does not require much prophetic vision to say that if things go on at this rate the present system will crush our masses completely in less than another hundred years. It is very like killing the goose with the golden eggs. So it must be either mended or ended. The whole subject came in for discussion between the years 1858 and 1862, and Lord Halifax (then Sir Charles Wood) terminated the controversy by recommending, at the instance of Lord Canning, the introduction, subject to some conditions, of a settlement in perpetuity of the revenues derived from the soil all over the country. The principles of the despatch of 1862 were re-affirmed in a subsequent one of 1865 and again by Sir Stafford Northcote (afterwards Lord Iddesleigh) in 1867. There having arisen some difficulty to give effect to them, a sort of 'modified' permanent settlement was approved of by the Secretary of State for India in a Despatch of 1883 on the recommendation of Lord Ripon. All these ponderous and weighty State documents now remain practically as dead letters. The Indian National Congress have repeatedly prayed for the fulfil-

*Some of the more important minutes and notes of these and other Indian administrators on this subject have been collected together in Mr R. C. Dutt's *Famines in India*, pp. 143-93.

ment of these pledges and Mr. R. C. Dutt has now come forward to advocate some sort of light and long-term settlement in those parts of the country where the permanent settlement does not obtain at present. Permanent settlement as it obtains in Bengal is not a settlement between the State and the ryot but between the Government and a class of revenue farmers and contractors. Excepting an extremely limited and selfish class of people known as the Zemindars, this system has benefited neither the State nor the ryots. The State has been deprived of its legitimate share of the unearned increment in the soil nor has the ryot been effectively secured against arbitrary exactions and unauthorised imposts.* If the Bengalee ryot is better off than his half-starved brother of the Deccan or the Central Provinces, we must look to some thing else than permanent settlement as its cause. But a very unusual fertility of the soil and over-abundance of water—water indeed is the great *wealth* of Bengal—there is nothing very materially different in the economic conditions of the Bengalee ryot from those of the ryot in less favoured provinces. I believe and, the more closely I study the subject and gather experience, the conviction grows in me

*In spite of the Acts of 1859, 1868, and of 1885, which all have extended and consolidated the rights of the Bengali cultivator, some of the large landholders of these provinces manage to enhance rents, levy illegal contributions, and deal with the Ryot as best as he pleases.

that the ryot in a permanently-settled district is not less rack-rented or any way better treated than the ryot of any other district in the country. If the Bengalee ryot thrives and prospers, it is certainly not with the help and support of his Zemindar but in spite of him. The average Bengalee Zemindar,—particularly the average absentee landlord—is as much of a heartless screw as those enemies of the ryots who thrive all over the country under such different names as the bania, the sowcar, or the mahajan. The Zemindars of Bengal have never reclaimed, embanked, drained, irrigated, or introduced any new staples or otherwise done anything, or taken any other means, to promote the prosperity or well-being of their tenantry. So, if we must have again any sort of fixity of tenure in the land—and fixity of tenure in some form or other is the only remedy of the danger and must form the sheet-anchor of our public revenue*—we hope the mistake of Lord Cornwallis will not be repeated and that some sort of permanent settlement directly between the State and the ryot, without any middlemen—such as zemindars, talukdars, or malguzars,—be effected. In our anxiety to better the condition of the Indian ryot, let us not do anything which

*If, at least, the proportion of produce to rent were fixed and all reclassification of soils or recalculation of grain out turns could be rigidly excluded from all settlements, that might also go a great way in assuring the Ryot of the good intentions of the Government.

might be turned by an unscrupulous set of people into a veritable engine of oppression or a death-trap against him, nor let us deliver the powerless and helpless ryot from the merciless hand of the State and the bania only to throw him to the mercies of a mushroom aristocracy—revenue farmers and contractors.

Yet the fact must be admitted by all close and careful students of Indian problems that over-assessment of land and the harsh and rigid enforcement of the Government revenue demand operate very strongly upon the condition of the Indian ryot. So far back as the 'seventies, the Deccan Riots' Commission found the defects of the Government revenue system, particularly the manner of its exactions at fixed times, as some of the most potent causes of agrarian riots and misery. Speaking in the Viceroy's Council in the year 1879, the Honble Mr. (now Sir) Theodore Hope frankly admitted that 'to our revenue system must in candour be ascribed some share in the indebtedness of the ryot.' Sir Robert Egerton, then Lieutenant-Governor of the Punjab, and Lord Lytton, then Viceroy of India, also emphasised from their place in the Council upon the stringency and rigidity of the present fiscal system. The Famine Commissioners and many responsible officers of the State have since then accepted that view of the

question and it now only remains to be seen how the defects can be met. To me it appears that though over-assessment is a danger which should always be guarded against both in the interest of the State and the ryot, it is not the whole evil nor has it *yet* assumed the magnitude of a grave political danger some of its unsparing critics would have us believe. The greater danger is the rigidity of the system*—the *payment of cash at fixed dates*—which obliges the peasant to pay in the State revenue before he may have reaped his harvest and found time to sell them. This undoubtedly presses more heavily upon the Indian ryot and drives him oftener to the coils of the moneylender than the actual demand of revenue. In times of distress or lean years, Government no doubt remits or suspends a large amount of its revenue, but that brings so little relief and benefits so few people that this tardy humanity often misses its mark. The only remedy that can be suggested under the circumstances is the reversion to the time-honoured practice of levying the revenue in kind according to the amount of crop, at least in provinces of precarious climate. It will not only prevent the agricultural labourer to go to the money-lender for his State revenue but will allow

* *Vide* Mr. J. S. Cotton's article on *India* in the Volume of *Colonies and Dependencies* (1st Edition, Macmillan's English Citizen Series), p. 67.

him to pay it at his convenience and yet leave him some margin for sustenance and some resource to fall back upon in an evil day. As the proposed system is bound to act automatically as a sliding scale, this would also do duty for a lenient assesment. Personally, I would not have ventured to make such a bold proposal if men like Sir William Wedderburn on the one hand and Sir James Caird on the other had not strongly advocated it. Sir James Caird says :—

“If we had it in our power to begin again, I would revert to the old plan of the Government taking its rent in a share of the produce. That share should bear a relation to the quality of the soil and its situation. On the best soils this plan might have the objection that it would discourage good cultivation when the cultivator did not keep all the increase to himself, and there it might be proper to modify the principle. But on most of the land of India the cultivator puts no capital into the land. He has no cash. His theory is to let the land rest when it has been over-cropped, and to begin again on the land which has had rest. This he used to do till increasing population pressed on the area of cultivation, and obliged him to confine himself within narrower bounds than his fathers—so narrow that he can now spare none for fallow. The land thus has no rest, and is becoming by every round of crops slightly less productive.

“But this would have been different if his assessment had been taken in kind. Then he would have retained land enough to permit part of it to lie fallow. For, as he would be called on for only a share of the crop, he would lose nothing by leaving part of his land idle.

“This payment in money has also made him the slave of the money-lender. Government must be paid to the day, and

as the Banyia is the only capitalist within his reach, he hands over all his crop to the Banyia as a security for cash advances, instead of paying the Government its share of the produce in kind. That the Government could now, much more easily than in former times, take the rent in produce, there can be no doubt, and means might be adopted to prevent speculation. There would be no occasion for future re-settlement. Having fixed the proportion (for which in India there is much information in the Survey Department), the Government share would rise or fall in value with prices. If it should be determined at any future time to sell the Government interest in the land, it would be found to bear a just relation to its value, which it does not at present. This would really be a grand reform if it could now be accomplished. By releasing the Ryot from the money-lender, it would shut up a large proportion of the Civil Court business, and leave some capital gradually to accumulate in the Ryot's hands, and so enable him to improve his system of agriculture, and to maintain the condition of his land."*

Sir E. C. Buck admits this proposal to be 'based on a sound principle' but objects to its adoption on the ground that it would 'require a costly machinery' and be attended with such evils as 'corruption and harassment to the ryot.' As if the collection of the revenue in cash does not require a very costly machinery at present and no means can be devised to prevent corruption and harassment. Quite recently in the island of Cyprus money-rates have been abandoned and the old native custom of produce-rent substituted in its place, and would it be believed that the experiment has proved not only a blessing to the

* *India: the Land and the People*, pp. 213 & .

cultivator but also a 'great financial success to the State? Of course it would be displaying a lamentable ignorance of all knowledge of political economy to ignore the many disadvantages of this system, particularly that 'it is a source of oppression on the part of the land-lord, demoralisation of the tenant, and discouragement of agricultural improvement,' but even principles of political economy have to be modified in exceptional circumstances and speculation and demoralisation are things which can always be successfully guarded against; and the system now suggested has at least this to recommend itself that for a long time it was in vogue in this country and is perhaps the *only* one how the ryot can meet the State demand without any practical inconvenience to himself and without incurring an additional debt for the purpose, and the State can also be saved from occasional remissions and suspensions of revenue and the necessity to write off large dues and arrears now and then.

Another most important subject to be considered in connection with the condition of the agricultural population of this country is that of prices and wages or profits. Every student of Indian economics knows that prices and wages do not follow in India the proportion they have been found to do in western and other civilised countries, and that while prices of all necessities

of life have risen very high here in the last 30 years—over 150 per cent.—no proportionate or even appreciable increase in the wages or profits of the agricultural labourer or artisan has been found to have taken place within that period.* The inconceivably heavy rate of interest for money that still obtains in the country, and in some parts is still increasing among some classes of the people, proves beyond doubt the extremely low rate of wages and profits earned by our masses. In the metropolitan and other large cities, in the principal centres of trade and commerce, round the neighbourhood of mills and factories and plantations, wages have certainly gone up, but, as even so much as the fiftieth part of the entire population of the country are not benefited by this development of industrial life, no generalisation can be hazarded on its effect upon the whole question. While generally prices of almost all the necessities of life have gone up considerably, the present rate of wages of the labourer or the profits of the peasant-farmer does not much exceed what Mr. Thorold Rogers has calculated to have obtained in England in the 14th century and

*The Famine Commissioners of 1898 say: "The wages of these people (day labourers and artisans) have not risen in the last 20 years in due proportion to the rise in prices of their necessities of life." Sir James Caird and Mr. Sullivan, two of the Famine Commissioners of 1879, observed: "Already their wages bear a less proportion to the price of food than in any country of which we have knowledge."

what Abul Fazl mentions to have existed in this country during the reign of Akbar in the 16th century. "The unfortunate labourer", wrote Sir Samuel Baker in an article headed "Reflections in India," contributed to the *Fortnightly Review* of August 1888, "is a direct sufferer, as his food has somewhat increased in price, while his wages remain at the standard of former years." The Rev. Thomas Evans in a letter to the *Pioneer* said in 1891 : The price of food grain has gone up of late years at a very rapid rate, while the miserable pittance of pay earned by the poorer classes has hardly moved and not moved at all in agricultural localities." The great disparity between prices and wages which is to be found in this country appears to me to be entirely due to the demands of a foreign trade and the permanent excess of exports over imports—an unnatural condition of trade according to all sound notions of political economy—necessitated by the country having to meet an enormous and ever-increasing sum of money for the home charges of its existing government. In the present circumstances of the country, the advantages of an increased rate of prices are derived by, and divided among, the State, the bania, and the foreign merchant, and seldom reach the pocket of the agricultural labourer in the shape of an additional profit.*

*The Famine Commissioners of 1880 say (Report, Part II., pp. 124-125)

The rise in the prices of the staple grains, therefore, instead of benefiting the peasant-farmers, only intensify and accentuate the distress and discontent of the lower strata of society and finds nearly a fourth of the population of the country in a state of semi-starvation year in and year out. The only way out of the difficulty is to take some means to reduce the prices of grains, and this can only be done by preventing the unlimited exportation and depletion of our grain stores. The abolition of the Corn Laws has successfully secured cheap bread for the English labourer and artisan, while the introduction into this country of the

that the advantages of the upwards tendency of prices are divided between the Government and the cultivator. The Rev. Thomas Evans says between the cultivator and the money lender. In a very ably-written article headed *Indian Bread for British Mouths*, "A Roving Observer" wrote in the year 1891 in the pages of the now defunct *Anti-Jacobin* :—"To the peasant who grows the wheat high prices may be a benefit, provided that his circumstances enable him to reserve enough food for himself and his family and to sell the overplus at the most advantageous time and the best price. But it is believed that more often than not the peasant is entirely in the hands of his village money-lender; and that he is obliged, in payment of interest on his standing debt, to make over to that individual his whole crop at the landia's own valuation, so that the profit derived from the high market prices goes into the hands of the usurer.....English importers of corn buy the Indian Government bills in London, send them to India to be cashed, and so pay for the corn. In this way, roughly speaking, the annual 16 millions (home charges) are remitted to England in the shape (in part at least) of cheap corn. In other words, an annual corn-tribute is paid by India to England..... The question how all these millions (of Indian population) are to be fed while a richer nation is drawing part of their food away is likely to become a

same principles of free trade has unmistakably enhanced the prices of all the primary requirements of Indian life.* This may appear paradoxical or read like an economical heresy, but everybody who cares to compare the figures of English prices 30 years before and after the repeal of the Corn Laws and those of India for an equal period before and after the ports of this country were declared open to free commerce is bound to come to the conclusion I have just stated. Free trade, instead of benefiting India in any way, has only robbed her people of cheap food and many useful occupations. I would, therefore, seriously suggest to our Government to either impose a heavy and restrictive export duty on grains with a view to successfully prevent the outflow of our food-stuffs over the seas, or give the agricultural labourer a bounty for his cultivation, or regulate by any other economic measure the supply and demand of food for its own subjects. Considering that for a long time to come the Indian ryot will not have the power or the strength—all skin and bone that he now is—to fight the gaunt

serious one . . . With all deference to the Cobden Club, we may have to consider some day whether the unlimited export of corn from India to England is all that can be desired "

*In the Gazette of the N.-W. Provinces of 23rd May 1891, Sir Auckland Colvin, the Lieutenant-Governor of those provinces at that time, wrote :—"The export of wheat from Lucknow, Cawnpore, and elsewhere still continues, resulting in the present high prices of food grains."

spectre of famine with his own weapons, and that once in every decade the State is called upon to spend almost fabulous sums of money on famine relief and remit large amounts of land revenue. I hope the Government of the country will seriously consider the expediency of taking some measure in the way herein indicated.

Emigration in many cases have been found to effectively solve the questions of local congestion, heavy pressure upon the land, and also of national well-being. A day there was in the history of this country when some enterprising and advanced sections of its people emigrated to, and colonised in, Ceylon, Java, Sumatra, and some of the neighbouring islands and carried the banner of a higher civilisation in those parts of the world. The people of India have now become so home-loving and conservative, and their habits of life and religion so exclusive, and their caste rules so rigid, that any large and extensive schemes of free emigration must for a long time to come remain beyond the range of practical politics. Besides, the treatment accorded to our countrymen in Greater Britain, particularly in Natal and Cape Colony, are far from encouraging. In Australia, Indians are not even allowed to land on its shores. Though, therefore, no idea of a free, voluntary emigration on a large scale can be seriously entertained, yet it may not be too much to hope that

some good might be effected by judiciously promoting inland emigration. In this too, a good deal must depend upon the results of Mr. Cotton's scheme of Assam Colonisation.

A general and all-round reduction of taxation has for nearly a generation formed the shibboleth of most Indian political reformers. Compared to the average income of an Indian, variously estimated by Mr. Grant Duff, Lord Mayo, Sir David Barbour, Mr. Dadabhai Naoroji, and Mr. William Digby, and none of whom think it to exceed £2 or Rs. 30 a head, and relative to the resources of the country, the present rate of taxation, Rs 2. 7 as. per head, is *very heavy* in all conscience. And, though besides the rent of land and the duty on salt, the poorer people, who are the direct sufferers in times of scarcities and famines, have no other taxes to pay, yet it must not be forgotten that land and salt between them contribute by far the greater portion of the Imperial revenue. So, the Indian proletariat are now bearing the brunt of Imperial taxation, which, take it from whatever point of view you please, must be condemned as both unfair and unjust. It is high time that the Government should see their way morally, economically, and politically to lighten or remove these burdens to other shoulders and make the Indian ryot more self-reliant

and resourceful. Of some form of fixity of tenure I have already spoken as the sheet-anchor of Indian finance. Now as to the salt tax, all that can be said in its favour is that it is a tax not of British invention but was first levied by the Mogul Emperors; nevertheless a more iniquitous and galling impost never disgraced a civilised administration* and its antiquity should never be allowed to stand for either as an excuse or a justification. Under Mahometan rule, however, it was a very mild tax, never exceeding 8 as. per maund,† and it was Lord Clive who first took it into his head to increase it almost to a prohibitive rate for the ostensible purpose of providing large salaries to British officials in order to remove them from the temptations of private trade and questionable practices.‡ Since then, the tax has on several occasions been reduced and, as often increased. Its last increase was made by Lord Dufferin in 1888 to meet the heavy expenditure of the third Burmese War. To all

*In a letter addressed to an Indian gentleman, dated 7, Northam Gardens, Oxford, April 2nd, 1892, the late Professor Max Müller wrote: "It has a tax on salt has been considered, in the whole history of the world, a disgrace to any civilised country. Tax alcohol by all means, tax extravagance at weddings, at shraddhs, at Durga Pujahs, and all the rest, but don't tax salt."

†Trotter's *India Under Victoria*, Vol. II., p. 270

‡Vide Mr. J. S. Cotton's article on *India* in the Volume of *Colonies and Dependencies* (First Edition, Macmillan's "English Citizen" series), p. 54

intents and purposes, salt is now a government monopoly and the duty upon it, nearly 7 as. per head, presses *most* cruelly upon the poor peasant and his land and cattle. The effect of the tax may be distinctly traced in the figures that while an average Britisher, who has comparatively small need for this commodity, consumes nearly 30 lbs. of it a year, an Indian with much greater need cannot get over 10 lbs. only. Comment upon these figures is, I think, useless. A tax upon the necessities of life, John Stuart Mill has condemned as 'unjust and detrimental to national wealth.' Considering the facts that it is a very good manure and that the Indian people are principally vegetarians and require more salt than meat-eating nations, that the health of their cattle depend to a great measure upon a liberal consumption of it and that it is a great prophylactic against leprosy, a disease to which tropical peoples are peculiarly liable, one cannot but regret deeply the circumstances which stand in the way of either its complete abolition or considerable reduction.

From the condition of the agriculturists, I now come to the other great question of minimising the effects of drought, so far as is possible, with the arts and efforts of man. This at once leads one to the paramount question of irrigation. Unhappily for India, for a long time past irrigation has ceased to be an article of

faith with the average Anglo-Indian administrator. The Public Works Department has for a long time busied itself primarily with the construction of Railways, and irrigation has hitherto had to play only second fiddle. It was an unhappy day, for India when irrigation was pitted against railways, and the problem narrowed itself into the polemical question of irrigation versus railways. It is sad to think that some of the best and most well-informed men connected with, or taking interest in, Indian administration have wasted much valuable time and energy in trying to prove the merits of the one as against the other. Some of the combatants who ranged themselves on the opposite sides were John Bright and Sir Arthur Cotton on the one and Sir Andrew Scoble and Mr. J. Danvers on the other. The controversy at last became so contagious that even the Famine Commissioners of 1880 did not escape showing some bias. A decisive turn, however, was given to this discussion by Lord Salisbury, then Secretary of State for India as Viscount Cranborne, setting his face against all major works of irrigation. To me it appears to have been a fatal mistake to reduce the question into one of Railways *vs.* Irrigation, and not, as it should have been, into one of Railways *and* Irrigation. None of them indeed can be considered as luxuries of civilisation, seeing the important functions they

each have to perform, in a country like India. I believe in Railways and Irrigation both, side by side and none to the exclusion of, or in preference to, the other. Railways are the vital organs of industry and commerce and the mainspring of material progress; and, though incapable of preventing famines directly, yet in mitigation of distress and bringing relief to suffering millions no more potent instrument have been found. In the Indian famines since 1860, the Railways have proved the most effective agency for the prevention of famine mortality. Above everything, railways have been instrumental in equalising prices over the country and making food available in all the provinces of the Empire in all seasons of the year and under all circumstances. As for irrigation, though it cannot alleviate distress when famine comes, it can considerably reduce the possibilities of famines by neutralising the effects of drought, bringing rainless tracts under cultivation, and fertilising the soil and improving agriculture generally.

Of course, irrigation, like every other thing human, has its detractors. There is a large school of Indian administrators and politicians who are of opinion that there has been much extravagance and useless expenditure in irrigation works in this country and that it were better both for the State and the people if such works as the Jumna,

the Sone, or the Midnapore canals, and such others, were never undertaken and executed at all. It would be idle to deny that there is much truth in this view of the case, but what is done is done, however much we may regret the waste and reckless expenditure of public revenue they have caused. There are others again who subscribe to the apprehension that there is no more room for much remunerative and useful irrigation and hold to the belief that it affects the fertility of the soil injuriously, in some cases by creating saline efflorescence and in others by washing away its salts, by depositing barren sands in the case of canals drawn from snow-fed rivers, and that, above everything, it brings in its train a large number of diseases by water-logging the soil. As the barren deposits generally sink in such cases to the bottom of the canals and the salt efflorescence can be drained off and prevented, as the loss of salts in the ground can easily be replaced by manure, and water-logging can be prevented by a more careful study of local peculiarities, these objections do not hold much water. And by the bye, can nothing be said against Railways in a similar way? Have they not killed all our indigenous arts and manufactures and made storage of grains impossible in the land at present? But let that pass, it is no part of my business to make any sort of captious criticism

against one of the most civilising levers of the modern world.

But while over 16,000 miles of new lines of railway have been laid in the country since the Royal Commission on Indian Famines sat*, thanks to the feverish zeal and breathless activity of its partisans and the pressure put upon the government by the European Trades Associations and Chambers of Commerce in the country, irrigation has not hitherto had much attention paid to it. The English and the Anglo-Indian merchant and manufacturer for whose interests chiefly railways have been pushed up so hurriedly *should* now rest awhile on their laurels, and allow the Indian Government to serve the poor and neglected Indian cultivator for sometime with whole-hearted devotion and zeal. Nor must it be presumed that by pushing irrigation more zealously the Indian government will be doing only a good turn to the Indian peasant but in all human probability such investment will benefit the State more than even the ryot. It has been seen that irrigation works already executed by the government of the country have not only secured large tracts of the country against famines but has also proved to be ex-

*The Famine Commissioners of 1880 recommended 10,000 more miles of Railways to protect the country against famines and the Famine Commissioners of 1898 have stated that most of the necessary protective railways have already been constructed.

tremely remunerative to the state in more ways than one.* About the overwhelming benefits of irrigation, I hope my readers will permit me to quote a few words from Mr. MacGeorge's work :—

“First, there is not only the complete immunity from famine over the large areas actually irrigated by those canals deriving their supply from permanent sources during years of drought, but at these seasons, the large surplus produce of the irrigated tracts is available to mitigate the severity of famine or scarcity over extensive areas outside them. Secondly, perennial irrigation canals, even in years of plentiful rainfall, are estimated to increase the food supply of the people in the case of rice cultivation, as much as 40 per cent. In the Madras Presidency the increase of produce due to irrigation is, according to crops, from four-fold to eight, and even ten-fold. In Northern India, the rental of irrigated land is twice to three times that of unirrigated, and in Madras the proportion is much larger—upto 12 or 15 times...For the general purpose, however, of increasing the food supply of the people, the valuable influence of irrigation, from whatever source of water supply it may be derived, is enormous. Either the staple foods consumed by the people are raised in greatly enhanced quantities, or where such crops may not, or cannot be grown, other valuable and exchangeable products can be substituted, which without the aid of a plentiful supply of water could not possibly have been cultivated.”†

*For the financial success of irrigation works, I would recommend my readers to read the last chapter of the Hon. Mr. Buckley's *Irrigation Works of India*, pp. 213-14 of Mr. MacGeorge's *Ways and Works in India*, Chesney's *Indian Policy* (Chap. XVIII, new edition), and Sir Arthur Cotton's *Life* by his daughter, Lady Hope. Deakin's *Irrigated India* would also make very useful and pleasant reading on this subject.

† *Ways and Works in India*, pp. 17-18.

Now, as to the future of irrigation in India. Sir Andrew Scoble, Lord Lytton's Minister for Public Works, estimated that an outlay of 'at least some three hundred millions sterling would be required to ensure India against famine' by providing it with an efficient network of canals properly filled with water. But a long time has passed since Sir Andrew Scoble's estimate, and in the meantime many extensive works of irrigation have been brought to completion. 'Water-works on a scale,' observed the late Sir William Hunter, 'adequate to guarantee the whole of India from drought not only exceed the possibilities of finance ; they are also beyond the reach of engineering skill.' 'Beyond the reach of engineering skill' is an expression which I have no doubt many engineers would strongly repudiate, and as to the 'possibilities of finance' no one desires the Government of India to embark on a mad scheme to complete all possible and necessary works of irrigation in the country in a couple of years or sooner. Everything must be done slowly and steadily and cautiously, and if the Government of this country have been able to get and spend close upon 275 millions sterling for its Railways, what is there chimerical in the idea of its finding an equal amount of money, say in the course of the next 30 years, for irrigation works ? Of course my readers must not run away

with the impression that the Government of India have hitherto completely neglected irrigation or spent no considerable amount of money for it,—many extensive and most useful works of irrigation have already been executed, like the gigantic works as the Jumna and the Ganges and the Chenab Canals in the North, and Kavery and the Godavary and the Krishna delta irrigations in the South—but what I mean to point out is that much yet remains to be done and that the money spent on irrigation is not at all commensurate with the great value and need for it and is not in fair proportion with the amounts spent on railways.*

It goes without saying that some parts of India can never be brought either under cultivation or irrigation. There are in this country 116 millions acres of unculturable, and 47 millions of forest, lands where no sane man will ever propose to construct any works of irrigation. Then there are 70 millions of acres where cultivation is possible but irrigation is not. We have to exclude this also from its field of operation. But so many as 33 millions of acres still remain where both cultivation and irrigation are possible, and 43 millions of acres where cultivation can be

*The following figures will explain what I say :—

Irrigation : Up to 1896-97 : capital outlay : Rs. 41,352,201.

Railways : Up to 1894

Rs. 246,880,000.

greatly improved by irrigation. What a vast field of work lies here—76 millions of acres of Indian soil still needing irrigation for cultivation and improvement.*

Sir Edward Buck concludes his article on "Irrigation" in the *Statistical Atlas of India* (1895) by saying: 'The Government of the country has still a great duty before it in aiding the cultivating classes—either by loans of money or by engineering assistance—to make extended use of the various forms of water and moisture supply available to them.' On this point, I think, I must go into a little bit of details. Irrigation can be effected by canals—navigable or otherwise—tanks and wells derived either from some permanent sources of water as large rivers and lakes, or from storage ultimately dependent upon seasonable rainfall. The latter is quite uncertain, and the State must never make any large outlay of money upon this class of irrigation works. But irrigation canals, tanks, wells, drawing their supply of water from some permanent and unfailing sources of water, are the only works that can be of great and infinite good in seasons of

*In the memorable famine speech, delivered by Lord Curzon in his Council on the 19th October last, occur these hopeful words: "There are few parts of the country where works for the storage of water are not practicable. They may not, and probably will not, be directly remunerative; but if such works will conduce to the greater security of the crops, and if they can be maintained at a moderate cost, it is just the sort of work which should be taken up or kept in hand for an emergency."

continued drought and consequently in famine prevention and insurance. But above all, the existing irrigation works in the country need looking after and their improvement is extremely desirable, and all new works should be made to follow native lines, as the most successful Anglo-Indian works have invariably been those which have neither departed nor deviated from them.

Bengal and, to some extent, Oudh are well-nigh protected from famines by their rivers and canals and do not require any extensive irrigation works. Madras also is partially safe owing to the possession of thousands of large water reservoirs and river delta irrigation works. Sindh, once the scene of the most recurrent and devastating famines, now depends no more to rainfall for its crops, and entirely trust to irrigation canals filled by the inundations of the Indus and is almost safe from famine. The Punjaub and the N.-W. Provinces at present principally depend upon a system of wells, and the Deccan with the Central Provinces and the entire south upon nothing in particular. It is in the sun-burnt plains of Rajputana and Central Provinces and parts of the Bombay Presidency and the Punjaub where earth is generally iron and sky brass that more irrigation is required, but most unfortunately these are exactly the parts of the country where it is so difficult to execute any permanently useful works

of irrigation. But as long as no stupendous schemes are devised by any Napoleon of engineering to irrigate these provinces more successfully, or these parts of the country are not given the benefit of artificial rain with the aid of dynamite and gunpowder without much cost, it is the duty of the government to construct as many wells as there are small holdings in the country, at least where there is good chance of their being supplied from spring or underground water. * Every well-constructed well in regions beyond the reach of canal irrigation is likely to prove a mine of wealth to the cultivator. "It is certain," says Sir H. S. Cunningham, "that there is scarcely a district in India, where money, judiciously employed in well-sinking, would not earn a good rate of interest besides conferring enormous benefits on the country." As to how best they can be done, the government have in their hands enough of reports and proposals and estimates to go by, and it, therefore, does not fall within my humble province to offer any detailed scheme or suggestions about them.

As to a large scheme of land reclamation, it is far too much of a costly venture to be either lightly undertaken by any body of cultivators or

*In his great famine speech of October last, Lord Curzon observed in this connection: "It would seem that the underground storage of water might be more widely and systematically undertaken and that a more generous policy might be adopted towards the construction of wells."

peasants with their unaided resources, or by the State in its present stress and difficulties. There is not much chance, therefore, of an easy solution to the question under discussion in that way.

Now, I come directly to improvements of agriculture. Mr. W. Crooke, a brilliant Anglo-Indian writer, asks in this connection: "Will some grand agricultural discovery, some invention in the way of a new system of culture, some secret of chemistry which the world as yet knows not, some idea which will flash through the land, simple and cheap enough for any rustic to employ, and yet such as will not give a shock to his habitual methods, expel for a time the demon of poverty, and give them (the Indian agriculturists) a new start?"*. Let us devoutly hope for the advent of a better day for the Indian agricultural labourer, and we trust science, human ingenuity and the resources of civilisation will duly extend their aid to the solution of these pressing Indian problems. Let us also hope that before heavens and earth can conspire together to decimate Indian mankind, some sort of chemical or artificial food will be discovered cheap enough for the Indian ryot. But alas! for a long time yet, chemical or artificial food or any revolutionising methods of culture must remain a dream of the chemist or the prophets of the millenium.

* *The North Western Provinces of India*, p. 174.

In the meantime let us seriously engage ourselves upon the humbler task of improving our cultivation and agricultural processes, so far as lies in the power of the State and the people to do. It is churlish and idle to deny, however highly we may praise the assiduity of the Indian peasant and his knowledge of agriculture, that there is an extensive margin of improvement all along the line.

At present an average Indian acre yields only 11 bushels of corn while in England an acre produces 28 bushels. This marks the difference between scientific and unscientific agriculture. Sir James Caird thinks :

following are essentially required towards that end: good breeds of cattle, extensive use of manure, preservation of forests and village commons and pasture grounds, cultivation of fodder crops and, above everything, some elementary knowledge of agricultural chemistry. For want of an adequate knowledge of agricultural chemistry, much mischief and injury has been, and still is being, done to the soil. A more widespread practical knowledge of rotation of crops, of the uses of deep ploughing, of the value of new staples and cow-dung, fish-bones and fossil deposits, and of the evils of quick-growing crops must always serve our peasantry in better stead.* As for fodder crops, it has already been suggested officially that in the area of precarious rainfall it would be better to utilise all waste, as grazing, lands and by establishing plantations of fodder trees rather than grow crops upon them. This would not only be a direct economic gain but would also in seasons of continued drought avert the terrible losses of cattle. Of manure the Indian agricultural labourer has enough of theoretical knowledge but his use of it is limited

* It appears that the few model or experimental agricultural farms that have been established in some parts of the country have failed in their primary mission of improving Indian agriculture to any appreciable degree. Some new and practical means must be found to instruct the village agricultural labourer in knowledge of elementary chemistry and of the use and value of new staples and processes.

by his means and resources. Dr. Voelcker says that this question is 'indissolubly bound up with the well-being and even the bare existence of the people of India'. Much injury has already been done in many parts of the country by the wholesale destruction of forests owing to ignorance. These should be preserved from further destruction and made to be a source of our agricultural prosperity. Better breeds of cattle is only a question of money and knowledge, and the State must make some efforts to secure them to our peasants.

The principle of advancing money to the cultivating classes for land improvements has been broadly enunciated by the Government of India in some of its legislative enactments, but from one end of the country to the other that not only remains as a dead letter but is more honoured in the breach than in the observance. It would be difficult to find a greater farce in Anglo-Indian administration than its management of *takkavi* advances. If money could really be advanced to our agricultural population either by the State or by any private party or organisation for land improvements, what a revolution could it not create in the productiveness of the soil. Now agriculture, according to all reliable accounts, is simply a process of exhaustion or rather of spoliation, but with proper care and knowledge

not only could the soil be secured against all injury but famine itself might almost be made a thing of the past. This view of the matter is not my original one but has been advanced and shared with some amount of confidence by men of such different stamp as Sir James Caird, Sir William Hunter, and Mr. Hume.

Everything said and done, there will still remain a considerable margin for anxiety in our situation. The element of uncertainty cannot altogether be eliminated from a view of, and considerations on, Indian affairs. Do what we will, human calculations are occasionally bound to go wrong, human foresight prove deceptive and misleading, and human power impotent to grapple with the evils of creation or to regulate the winds or control the monsoons. Ultimately we must learn to trust to, and depend upon, Providence for the prevention and relief of all our difficulties and distress. Let us, therefore, like the devout singers of the Rig-Veda in the morning of our history, pray to and invoke the aid of the Divine Master to give to this unhappy and ancient land all that is required for the sustenance of human life and strength and means and wisdom to our rulers and our people to fight and conquer the elements of Nature.
